

REMARKS

Reconsideration is requested.

Claims 1-21 and 39 have been canceled, without prejudice. Claims 46-49 have been added, based on unamended claim 23. Support for the amendments can be found throughout the specification. No new matter has been added. Claims 22-38 and 40-49 are pending.

The objection to the specification relating to the requirements of Rule 821(d) is noted. The Examiner's assistance is requested as to sequences in the specification which are not accompanied by sequence identifiers. Specifically, amendments to the specification were made with the Amendment of August 19, 2003. The amendments made to the specification with the Amendment filed August 19, 2003 are contained in the PTO IFW. The Examiner's assistance in specifically identifying sequences which are not identified by sequence identifiers will be appreciated. The undersigned notes that the amendments of August 19, 2003 are believed to be the same as the amendments to the specification submitted with the Amendment of December 27, 2001 in the parent application Serial No. 09/913,525, and which were found by the present Examiner to satisfy the Sequence Listing Rules requirements. See Interview Summary dated May 21, 2003 mailed in Serial No. 09/913,525 ("The paper filed 12/27/01 including a CRF has been entered. The requirement in the final rejection for sequence compliance is no longer necessary.")

The Title has been amended above in response to the Examiner's requirement for the same.

Claim 41 has been amended above to obviate the rejection of the same stated on page 2 of the Office Action dated May 22, 2006. Withdrawal of the objection is requested.

The Section 112, second paragraph, rejection of claims 22-24, 33, 35, 37-39, 44 and 45 is obviated by the above amendments. The applicant has attempted to address each of the Examiner's concerns in the above amendments. The Examiner is requested to advise the applicant in the event anything further is required in this regard. Withdrawal of the Section 112, second paragraph, rejection is requested.

Claim 41 has been amended above to obviate the Section 101 rejection of the same stated on page 4 of the Office Action dated May 22, 2006. Withdrawal of the rejection is requested.

The Section 101 rejection, and associated Section 112, first paragraph, rejection, of claims 22 and 42 is believed to be obviated by the above amendments. Specifically, the claims do not refer to vaccines while reading on immunogenic compositions. The claimed invention is submitted to be operative the claims are submitted to define patentable subject matter. Withdrawal of the Section 101 rejection, and associated Section 112, first paragraph, rejection, of claims 22 and 42 are requested.

The Section 112, first paragraph, claim 24 is submitted to be obviated by the above amendments in that the objected-to recitations have been deleted. Withdrawal of the Section 112, first paragraph, rejection of claim 24 is requested.

The Section 102 rejection of claims 22, 24, 26-37 and 41 over LaCasse (Science, Vol. 283, No. 5400, 15 January 1999), is traversed. Reconsideration and withdrawal of the rejection are requested in view of the following distinguishing comments.

Initially, the applicant believes that the cited documents may disclose that the binding of gp120 to CD4 results in a conformational change of gp120 which enables new epitopes to be exposed. There is no disclosure or suggestion however of the control of the progression of the fusion to have different complexes depending on the fusion progress with therefore the possibility to raise different antibodies at each step of the fusion progress

Specifically with regard to LaCasse, the control of the progression of the fusion and conditions to perform the fixation is not understood to be described or suggested by the authors. Moreover, the teaching is understood to concern a cellular system which cannot be exploited in humans, while the presently claimed invention relates to the use of a molecular system.

The claims are submitted to be patentable over the cited art and withdrawal of the Section 102 rejection is requested.

The Section 102 rejection of claims 22, 26, 29, 30, 36 and 37 over Schonning (Ugeskrift for Laeger, Vol. 161, No. 31 (1999 August 2), page 4415-6), is traversed. Reconsideration and withdrawal of the rejection are requested as the document is understood to have been published after the filing of the priority benefit claim of the present application. The undersigned has been advised that an English translation of the priority document is being prepared. The undersigned will file the same once received, under separate cover.

Withdrawal of the Section 102 rejection is requested.

The Section 102 rejection of claims 22, 31, 38, 39 and 41 over DeVico (Virology, Vol. 211, No. 2 (22 August 1995), pp 583-588), is traversed. Reconsideration and

withdrawal of the rejection are requested in view of the following distinguishing comments.

The applicant believes that the cited document discloses, at best, a covalently crosslinked complex of HIV 1 gp120 and CD4 receptor: the complex being obtained by combining equimolar quantities of gp120 and soluble CD4, incubating 1h at 37°C and crosslinking by addition of BS for 1h at room temperature and at 4°C for 16h (see page 584, left column, 2nd paragraph). In contrast, the complexes of the presently claimed invention are formed by fusion in a molecular system.

Withdrawal of the Section 102 rejection is requested.

The Section 102 rejection of claims 22, 31, 38, 39 and 41 over Kwong (Nature, Vol. 393, No. 6686 (1998), pp 648-659), is traversed. Reconsideration and withdrawal of the rejection are requested in view of the following distinguishing comments.

Kwong et al is understood by the applicant to disclose the x ray crystal structure of an HIV gp120 complexed to a two domain fragment of hCD4 and an antigen binding fragment of a neutralizing antibody. There is no teaching by Kwong et al however on the study and identification of complexes formed at determined intervals of the fusion.

Withdrawal of the Section 102 rejection is requested.

The Section 103 rejection of claims 22, 25 and 41 over DeVico or Kwong in view of Rigaud (Biochemica et Biophysica Acta, Vol. 1231 (1995), pp 223-246), is traversed. The Section 103 rejection of claims 22 and 40 over LaCasse in view of Rossio (Journal of Virology, Vol. 72, No. 10, October 1998), is traversed. The Section 103 rejection of claims 22-24 and 26-40 and 41 over LaCasse in view of Riley (Journal of Virology, Vol. 72, No. 10 (October 1998), pp 8273-8280), is traversed.

VEAS
Appl. No. 10/642,763
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Reconsideration and withdrawal of the Section 103 rejections are requested as the secondary references are not believed to cure the deficiencies noted above with regard to the primary references.

The claims are submitted to be in condition for allowance and a Notice to that effect is requested. The Examiner is requested to contact the undersigned in the event anything further is required.

Respectfully submitted,

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